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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: :  
Hideaki SAKAI, et al. : GROUP ART UNIT: 1761  
SERIAL NO.: 10/083,387 : EXAMINER: TRAN, Lien T.  
FILED: FEBRUARY 27, 2002 :  
FOR: PROCESS FOR PRODUCING :  
FRIED INSTANT NOODLES

DECLARATION UNDER 37 C.F.R. §1.132

ASSISTANT COMMISSIONER FOR PATENTS  
WASHINGTON, D.C. 20231

SIR:

I, Kohori Jun, the undersigned, a citizen of Japan, do hereby declare that:

1. I am a graduate of the School of Engineering, Tohoku University and received my Masters Degree in Applied Chemistry in the year 1985.

2. I have been employed by Kao Corporation for 18 years as a researcher in the field of biotechnology and food science.

3. The following comparisons were carried out by me or under my direct supervision and control.

The production process is as follows, which is as close to the method disclosed in Greene et al. U.S. 6,042,866 as possible, utilizing oils that fall within that disclosed by

Gotoh et al. U.S. 6,004,611 and oils that contain the claimed at least 50% diglyceride content, to produce fried instant noodles.

### Production Process

Noodles were produced by optimizing the general method of Greene. More specifically, noodles were steamed, dried, fried, and reconstituted according to the following procedures.

#### Steaming

240g of Honba Sapporo Nishiyama Rahmen Products of Nishiyama Seimen Corp, what was possible to buy in a shop for consumer, was steamed in a steam cooker for 3 minutes.

#### Drying

In Greene, the amount of water in embodiment was set as 40%. Therefore, the steamed noodle was dried in a electric dryer, which temp is 105°C, until the amount of the water was being 20% what was measured by 75g(49.8g in dry) stuff as is changing. It took for 19 or 23 minutes to reach 20 % water amount.

#### Frying

The fat/oil what was used is shown in Table 1 reproduced once again below.

Table 1

Sample	Preparation					a content(wt%) of		
	Raped Oil <sup>1)</sup>	Hi Di-glycerides oil/fat <sup>2)</sup>	Vitamine E (%)	Ascorbic acid ester (%)	Silicone <sup>3)</sup> (%)	Tri-glycerides	Di-Glycerides	Mono-glycerides
( 1 )	0.00	99.90	0.07	0.03	0.0002	13.5	85.7	0.7
( 2 )	24.98	74.93	0.07	0.03	0.0002	34.7	64.7	0.5
( 3 )	49.95	49.95	0.07	0.03	0.0002	55.9	43.7	0.3
( 4 )	99.90	0.00	0.07	0.03	0.0002	98.3	1.6	0.0
1 ) "Canola Oil", a product of Honen Corp.								
2) Tri-glycerides 13.5%, Di-glycerides 85.8%, Mono-glycerides 0.7% (Oil/Fat obtained by reacting fatty acid, which had been obtained by hydrolyzing refined rapeseed oil, with glycerin in a manner known per se I 'in the art while using an immobilized, 1,3-specific lipase as a catalyst and then refining the reaction product								
3)"K S - 6 6 ", a product of Shin-Etsu Chemical Co., Ltd.								

Getting a time for frying dried noodle at 125°C, 30g of dried noodle was fried in 1.5kg of fat/oil (1) for 40sec, 60sec, 80sec or 90sec. The noodle fried 60 sec. was most preferable in view, color, and feeling of touch. Therefore, dried noodles of 30g were fried in each oil/fats, which are shown as (1) through (4) in table 1, of 125°C for 60 sec. The fried noodle fried in between fat/oil (1) through (4) is named between sample(1) through sample (4) respectively.

### Reconstitution

The fried noodle, which was fried is in oil/fat(1) of 125°C for 60sec, was backed to edible in boiled water. The noodle was inspected in every 30 sec after 2minutes it was still in the boiled water. The boiling term for 4 min. and 30 sec. was best. Therefore, the inspection was done after 4 min. 30 sec. boiling in between

sample (1) and sample (4).

### **Testing Parameters**

The resulting noodles were tested and classified as shown according to the following:

**Oiliness : Flavor(oily smell) of instant noodles after reconstitution with boiling water**

- A: Absolutely free of distastefulness from deterioration of oil/fat.
- B: Substantially free of distastefulness from deterioration of oil/fat.
- C: Slightly detectable distastefulness from deterioration of oil/fat were discernible.
- D: Detectable distastefulness from deterioration of oil/fat were recognized.

**Flour flavor: Flavor(flour flavor) of instant noodles after reconstitution with boiling water**

- A: Detectable very flour flavor.
- B: Detectable flour flavor.
- C: Slightly detectable flour flavor.
- D: Undetectable flour flavor.

**Kansui taste: Flavor(irritating taste from kansui) of instant noodles after reconstitution with boiling water**

- A: Substantially free from irritating taste from kansui
- B: Slightly detectable irritating taste from kansui
- C: Detectable irritating taste from kansui

**D: Detectable strong irritating taste from kansui**

**Smoothness: Texture(smoothness of noodle surfaces) of instant noodles after reconstitution with boiling water**

**A: Very smooth noodle surfaces**

**B: Smooth surface noodle**

**C: Rather smooth surface noodle**

**D: Rough noodle surfaces without smoothness**

**Elasticity: Texture(elasticity) of instant noodles after reconstitution with boiling water**

**A: Very elastic**

**B: Rather elastic**

**C: Small elastic, noodle snaps**

**D: No elastic**

**Sogginess: Texture(non-proneness)of noodles after reconstitution with boiling water**

**A: Very slow tendency of noodles to get soggy, and very good in non-proneness to sogginess.**

**B: Substantially slow tendency of noodles to get soggy, and good in non-proneness to sogginess.**

**C: Slight slow tendency of noodles to get soggy.**

**D: Fast tendency of noodles to get soggy.**

## Results

The results of the classification of the noodles made according to the above are as follows in Table 2.

Table 2

Sample	Flaver			Texture		
	Oiliness	Flour	Kansui	Smoothness	Elasticity	Soggi-ness
( 1 )	A	A	A	A	A	A
( 2 )	A	B	B	B	B	A
( 3 )	A	B	B	C	C	A
( 4 )	A	C	C	D	C	A

The results of Table 2 demonstrate that the noodle that has been produced within the optimized parameters of Greene et al. using sample (1) or sample (2) in the above Table 1 as frying oils have superior smoothness and elasticity, with respect to the method utilizing sample (3) and sample (4) in above Table 1 as frying oils. Further, the noodles produced in methods utilizing sample (3) and sample (4) frying oils do not have acceptable flour taste when compared to that of noodles made from methods utilizing samples (1) and/or (2) as frying oils. Thus, the noodles made from the claimed method are clearly superior in elasticity and smoothness when compared to noodles made by an optimized process according to Greene et al. utilizing the oil according to Gotoh et al.

In light of the above, it is clear that a noodle heated in an oil containing less than 50% and greater than 40% diglyceride as disclosed by Gotoh et al. and further prepared according to an optimized method disclosed by Greene et al. is not very acceptable in regards to its smoothness and elasticity. In contrast, the noodle made by the claimed

smoothness and elasticity compared to those noodles heated in an oil disclosed by Gotoh et al., even when such a method (except the heating step in an oil containing at least 50%) is very similar to that disclose by Greene et al.

Further, the comparative data provided above clearly demonstrate that the noodles and method of making the same is superior to those noodles and methods utilizing an oil with less than 50% diglycerides and greater than 40% diglycerides as disclosed by Gotoh et al.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is believed to be true and correct.

Jun Kohori

Signature

Dec. 24, 2003

Date